

WHAT IS CLAIMED IS:

1. A system for reporting a failure condition in a server system,
comprising:
 - 5 a controller which monitors the server system for system failures, and generates an event signal and failure information if a system failure is detected;
 - 10 a system interface, coupled to the controller, which receives the event signal;
 - 15 a central processing unit, coupled to the system interface, wherein, upon receiving the event signal, the system interface reports an occurrence of an event to the central processing unit; and
 - 20 a system log which receives failure information communicated from the system interface and stores said failure information.
2. The system of Claim 1 wherein the system log is a nonvolatile random access memory.
3. The system of Claim 1 wherein the system interface comprises a bit vector, having a plurality of bits, which receives the event signal and stores a value corresponding to the event signal, wherein the event signal changes the value of at least one bit of the bit vector.
4. The system of Claim 1 further comprising a system recorder, coupled between the controller and the system log, for receiving the failure information from the controller, assigning a time value to the failure information, and subsequently storing the failure information with the time value into the system log.
- 25 30 5. The system of Claim 1 wherein the central processing unit executes a software program which allows a system operator to access the system log to read the failure information.

6. The system of Claim 5 further comprising a monitor coupled to the central processing unit for displaying a message to the system operator.

5 7. The system of Claim 1 further comprising a remote interface, coupled to the controller, for receiving the event signal and reporting an occurrence of an event to a computer external to the server system.

10 8. The system of Claim 7 wherein the remote interface comprises a bit vector, having a plurality of bits, which receives the event signal and stores a value corresponding to the event signal, wherein the event signal changes the value of at least one bit of the bit vector.

15 9. The system of Claim 7 wherein the computer stores and executes a software program which allows a user of the computer to access the system log to read the failure information.

20 10. The system of Claim 7 further comprising a switch, coupled to the remote interface, for switching connectivity to the remote interface between a first computer and a second computer.

25 11. The system of Claim 10 wherein the first computer is a local computer, coupled to the switch via a local communications line, and the second computer is a remote computer, coupled to the switch via a modem-to-modem connection.

25 No. A failure reporting system for a server system, comprising:
a controller which monitors the server system for system failures and generates an event signal and failure information if a system failure is detected;
a system recorder, coupled to the controller, which receives failure information and assigns a time value to the failure information;
30 a system log which stores failure information received from the system recorder; and

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a system interface, coupled to the controller, which receives and stores the event signal, and reports an occurrence of an event to a central processing unit which is coupled to the system interface, wherein the central processing unit executes a software program which allows a system operator to access the system log to read failure information stored therein.

13. The system of Claim 12 wherein the system log is a nonvolatile random access memory.

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14. The system of Claim 12 wherein the system interface comprises a bit vector which receives the event signal and stores a value corresponding to the event signal, wherein the event signal changes the value of at least one bit of the bit vector.

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15. The system of Claim 12 further comprising a remote interface, coupled to the controller, which receives the event signal and reports the occurrence of an event to a computer external to the server system.

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16. The system of Claim 15 wherein the remote interface comprises a bit vector which receives the event signal and stores a value corresponding to the event signal, wherein the event signal sets at least one bit of the bit vector to indicate that a system failure has occurred.

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17. The system of Claim 15 further comprising a switch, coupled to the remote interface, which switches connectivity to the remote interface between a first computer and a second computer.

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18. The system of Claim 17 wherein the first computer is a local computer, coupled to the switch via a local communications line, and the second computer is a remote computer, coupled to the switch via a modem connection.

19. A failure reporting system for a server system, comprising:
a controller which monitors the server system for system failures and generates an event signal and failure information if a system failure is detected;
a system recorder, coupled to the controller, which receives the failure information and assigns a date and time to the failure information;
a system log which stores the failure information;
a system interface, coupled to the controller, which receives and stores the event signal and reports an occurrence of an event to a central processing unit, coupled to the system interface, wherein the central processing unit executes a software program which allows a system operator to access the system log to read failure information stored therein;
a remote interface, coupled to the controller, which receives the event signal and reports the occurrence of an event to a computer external to the server system; and
a switch, coupled to the remote interface, which switches connectivity to the remote interface between a first computer and a second computer, wherein the first computer is a local computer, coupled to the switch via a local communications line, and the second computer is a remote computer, coupled to the switch via a modem connection.
20. A failure reporting system in a server system, comprising:
means for detecting a system failure condition;
means for transmitting failure information related to the failure condition to a system recorder;
means for storing the failure information; and
means for reporting an occurrence of an event to a central processing unit of the server system.
21. The system of Claim 20 further comprising means for notifying a human operator of the system failure.

22. The system of Claim 21 wherein the means for notifying a human operator comprises means for displaying a message on a monitor coupled to the central processing unit.

5 23. The system of Claim 21 further comprising means for accessing the system log to read the failure information from the system log.

10 24. The method of Claim 20 further comprising means for determining a time when the failure condition occurred and means for storing the time with the failure information.

25. The system of Claim 20 wherein the means for reporting the occurrence of the event to the central processing unit comprises:

15 means for sending an event signal to a system interface, coupled to the central processing unit;

means for setting a bit in a bit vector within the system interface, wherein the setting of the bit corresponds to a specified type of system failure; and

20 means for sending an interrupt signal to the central processing unit after the bit is set, wherein, upon receiving the interrupt signal the central processing unit reads a status register within the system interface to ascertain that the event signal has been received by the system interface.

25 26. The system of Claim 25 further comprising means for reading the bit vector to ascertain the type of system failure.

27. The method of Claim 20 wherein the means for reporting the occurrence of the event to the central processing unit comprises:

30 means for sending an event signal to a system interface, coupled to the central processing unit;

means for setting a bit in a bit vector within the system interface, wherein the setting of the bit corresponds to a specified type of system failure; and

5 means for setting a status of a status register within the system interface to indicate the occurrence of the event, wherein the central processing unit monitors the status register within the system interface at specified periodic intervals.

10 28. The system of Claim 27 further comprising means for reading the bit vector to ascertain the type of system failure.

~~29.~~ 29. A system for reporting a failure condition in a server system, comprising:

15 means for detecting the failure condition;
means for generating and transmitting failure information related to the failure condition to a system recorder;
means for assigning a time value to the failure information;
means for storing the failure information and its time value into a system log;
20 means for reporting an occurrence of an event to a local computer coupled to the server system via a remote interface;
means for accessing the system log; and
means for reading the failure information.

25 30. The system of Claim 29 wherein the means for reporting the occurrence of the event to the local computer comprises:

means for sending an event signal to the remote interface;
means for setting a bit in a bit vector within the remote interface, wherein the setting of the bit corresponds to a specified type of system failure;
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means for notifying the local computer that the event signal has been received by the remote interface.

31. The system of Claim 30 wherein the means for notifying the local computer comprises means for transmitting a ready-to-read signal to the local computer, wherein, upon receiving the ready-to-read signal, the local computer interrogates the remote interface to ascertain that the bit in the bit vector has been set.

32. The system of Claim 31 further comprising means for notifying a local operator, who is using the local computer, of the system failure.

33. The system of Claim 32 wherein the means for notifying the local operator comprises means for displaying a message on a monitor coupled to the local computer.

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comprising:

34. A system for reporting a failure condition in a server system,
means for detecting the failure condition;
means for generating and transmitting failure information related to the
failure condition to a system recorder;
means for assigning a time value to the failure information;
means for storing the failure information and its time value into a
system log;
means for reporting an occurrence of an event to a remote computer
coupled to the server system via a remote interface, wherein the remote
computer is connected to the remote interface via a modem connection;
means for accessing the system log; and
means for reading the failure information.

30 35. The system of Claim 34 wherein the means for reporting the occurrence
of the event to the remote computer comprises:

means for sending an event signal to the remote interface;
means for setting a bit in a bit vector within the remote interface,
wherein the setting of the bit corresponds to a specified type of system failure;
and

5 means for notifying the remote computer that the event signal has been
received by the remote interface.

36. The system of Claim 35 wherein the means for notifying the remote
computer comprises:

10 means for automatically calling a modem number corresponding to a
modem coupled to the remote computer, wherein, upon receiving the call, the
remote computer interrogates the remote interface to ascertain that the bit in
the bit vector has been set.

15 37. The system of Claim 36 further comprising:

means for verifying that the remote computer is authorized to access the
server system via the remote interface; and
means for verifying that a communication link has been established
between the remote computer and the remote interface.

20 38. The system of Claim 34 further comprising means for notifying a
remote operator, who is using the remote computer, of the system failure.

25 39. The system of Claim 38 wherein the means for notifying the remote
operator comprises means for displaying a message on a monitor coupled to the
remote computer.

30 40. A program storage device storing instructions that when executed by a
computer perform a method, wherein the method comprises:
detecting a system failure condition;

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transmitting failure information related to the failure condition to a system recorder;
storing the failure information in a system log; and
reporting an occurrence of an event to a central processing unit of the server system.

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41. The device of Claim 40 wherein the method further comprises notifying an operator of the system failure.

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42. The device of Claim 41 wherein the act of notifying an operator comprises displaying a message on a monitor coupled to the central processing unit.

43. The device of Claim 41 wherein the method further comprises accessing the system log to read the failure information from the system log.

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44. The device of Claim 40 wherein the method further comprises determining when the failure condition occurred and storing a representation of when the failure condition occurred in the system log.

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45. The device of Claim 40 wherein the act of reporting the occurrence of the event to the central processing unit comprises:

sending an event signal to a system interface, coupled to the central processing unit;

setting a bit in a bit vector within the system interface, wherein the setting of the bit corresponds to a specified type of system failure; and

sending an interrupt signal to the central processing unit after the bit is set, wherein, upon receiving the interrupt signal the central processing unit reads a status register within the system interface to ascertain that the event signal has been received by the system interface.

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46. The device of Claim 45 wherein the method further comprises reading the bit vector to ascertain a type of event.

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47. The device of Claim 40 wherein the act of reporting the occurrence of the event to the central processing unit comprises:

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sending an event signal to a system interface, coupled to the central processing unit;

setting a bit in a bit vector within the system interface, wherein the setting of the bit corresponds to a specified type of system failure; and

15 setting a status of a status register within the system interface to indicate the occurrence of the event, wherein the central processing unit monitors the status register within the system interface at specified periodic intervals.

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48. The device of Claim 47 wherein the method further comprises reading the bit vector to ascertain a type of event.

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49. The device of Claim 40 wherein the method further comprises reporting the occurrence of the event to a local computer connected to server system via a remote interface.

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50. The device of Claim 49 wherein the act of reporting the occurrence of the event to the local computer comprises:

sending an event signal to the remote interface;

setting a bit in a bit vector within the remote interface, wherein the setting of the bit corresponds to a specified type of system failure; and

notifying the local computer that the event signal has been received by the remote interface.

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51. The device of Claim 50 wherein the act of notifying the local computer comprises transmitting a ready-to-read signal to the local computer, wherein, upon

receiving the ready-to-read signal, the local computer interrogates the remote interface to ascertain that the bit in the bit vector has been set.

52. The device of Claim 51 wherein the method further comprises notifying a local operator, who is using the local computer, of the system failure.

53. The device of Claim 52 wherein the act of notifying the local operator comprises displaying a message on a monitor coupled to the local computer.

10 54. The device of Claim 52 wherein the method further comprises accessing the system log through the local computer to read the failure information.

15 55. The device of Claim 40 wherein the method further comprises reporting the occurrence of the event to a remote computer connected to the server system via a remote interface, wherein the remote computer is connected to the remote interface via a modem-to-modem connection.

20 56. The device of Claim 55 wherein the act of reporting the occurrence of the event to the remote computer comprises:
sending an event signal to the remote interface;
setting a bit in a bit vector within the remote interface, wherein the setting of the bit corresponds to a specified type of system failure; and
notifying the remote computer that the event signal has been received by the remote interface.

25 57. The device of Claim 56 wherein the act of notifying the remote computer comprises:

30 automatically calling a phone number corresponding to a modem coupled to the remote computer, wherein, upon receiving the call, the remote computer interrogates the remote interface to ascertain that the bit in the bit vector has been set.

58. The device of Claim 57 wherein the method further comprises:
verifying that the remote computer is authorized to access the server
system via the remote interface; and

5 verifying that a communication link has been established between the
remote computer and the remote interface.

59. The device of Claim 57 wherein the method further comprises notifying
a remote operator, who is using the remote computer, of the system failure.

10 60. The device of Claim 59 wherein the act of notifying the remote operator
comprises displaying a message on a monitor coupled to the remote computer.

61. The device of Claim 59 wherein the method further comprises accessing
the system log through the remote computer to read the failure information.

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